I. AMENDMENTS TO THE CLAIMS

Claim 1. (Currently Amended) A method for treatment of urinary incontinence by administering compounds having the formula:

$A–X_1–NO_2$

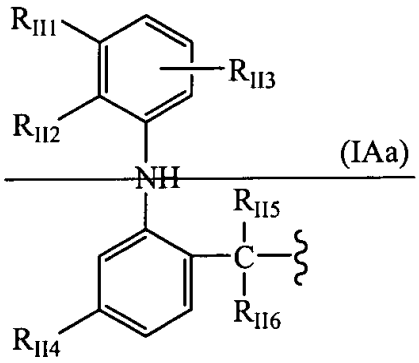
or their salts, where:

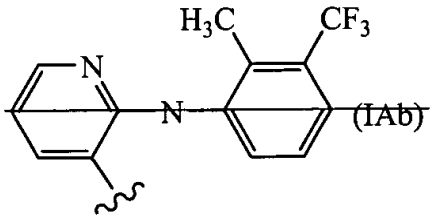
A = $R(COX)_t$ wherein t is an integer 0 or 1;

X = O, NH, NR_{1C} wherein R_{1C} is a linear or branched alkyl having from 1 to 10 C atoms;

R is chosen from the following groups:

~~Group IA), where t = 1,~~





~~where:~~

~~R_{II5} is H, a linear C_1-C_3 alkyl, or a branched C_1-C_3 alkyl;~~

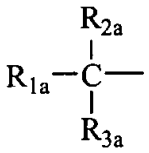
~~R_{II6} has the same structure as R_{II5};~~

~~R_{II1}, R_{II2} and R_{II3} are each hydrogen, linear C_1-C_6 alkyl, branched C_1-C_6 alkyl, C_1-C_6 alkoxy, Cl, F, or Br;~~

~~R_{II4} has the same structure as R_{II1} or is bromine;~~

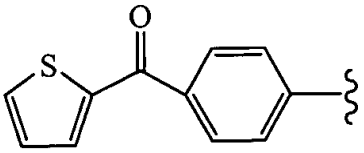
Group IIA) chosen from the following:

where, when t = 1, R is

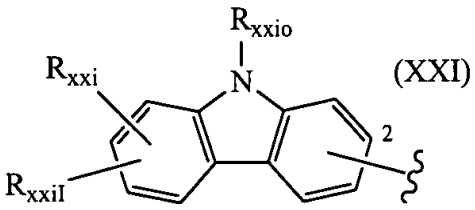


where R_{2a} and R_{3a} are H, a linear C_1-C_{12} alkyl, a branched C_1-C_{12} alkyl, or allyl, with the proviso that when one of the two is allyl the other is H;

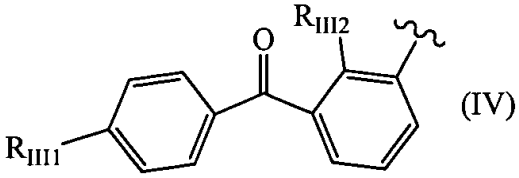
R_{1a} is chosen from the Subgroup II Aa) consisting of:



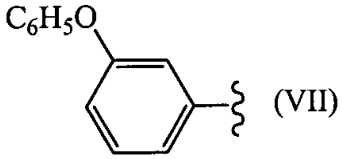
(II)



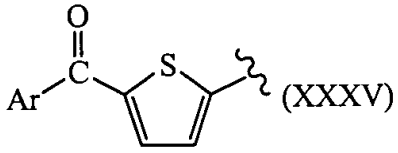
(XXI)



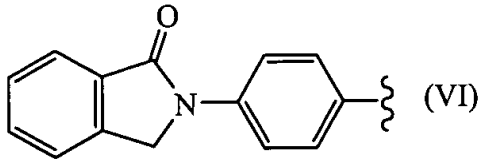
(IV)



(VII)



(XXXV)



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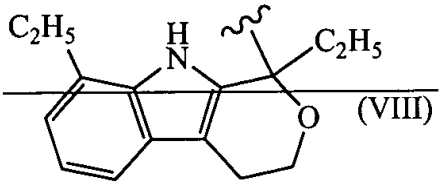
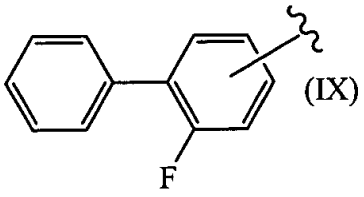


(VIII)



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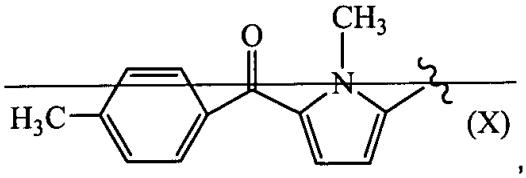
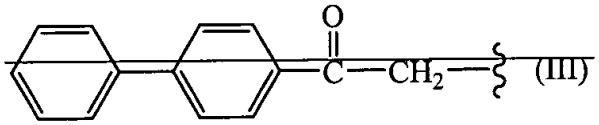


(X), and



(III)

wherein:

in the residue of formula (IV):

R_{III1} is H or SR_{III3} where R_{III3} contains from 1 to 4 linear or branched C atoms; and

R_{III2} is H or hydroxy;

in the residue of formula (XXI):

R_{xxio} is H, a linear alkyl having 1-6 carbon atoms, a branched alkyl having from 1 to 6 carbon atoms, a C_1-C_6 alkoxy-carbonyl bound to a C_1-C_6 carboxyalkyl, or a C_1-C_6 alkanoyl, optionally substituted with halogen, benzyl or halobenzyl, benzoyl or halobenzoyl;

R_{xxi} is H, halogen, hydroxy, CN, a C_1-C_6 alkyl optionally containing OH groups, a C_1-C_6 alkoxy, acetyl, benzyloxy, SR_{xxi2} where R_{xxi2} is a C_1-C_6 alkyl; a perfluoroalkyl having a 1-3 C atoms, a C_1-C_6 carboxyalkyl optionally containing OH groups,

NO_2, sulphamoyl, dialkyl sulphamoyl with the alkyl having from 1 to 6 C atoms, or difluoroalkylsulphonyl with the alkyl having from 1 to 3 C atoms;

R_{xxiI} is halogen, CN, a C_1-C_6 alkyl optionally containing one or more OH groups, a C_1-C_6 alkoxy, acetyl, acetamido, or benzyloxy,

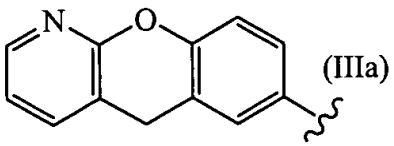
SR_{III3} is as above defined, a perfluoroalkyl having from 1 to 3 C atoms, hydroxy, a carboxyalkyl having from 1 to 6 C atoms, hydroxy, a carboxyalkyl having from 1 to 6 C atoms, NO_2, amino, mono- or dialkylamino having from 1 to 6 C atoms, sulphamoyl, a dialkyl sulphamoyl having from 1 to 6 C atoms, difluoroalkylsulphamoyl; or R_{xxi} together with R_{xxiI} is an alkylene dioxy having from 1 to 6 C atoms;

In the residue of formula (XXXV):

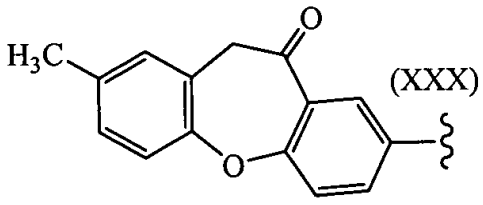
Ar is phenyl, hydroxyphenyl optionally mono- or polysubstituted with halogen, an alkanoyl or alkoxy having from 1 to 6 C atoms, a trialalkyl having from 1-6 C atoms, cyclopentyl o-hexyl o-heptyl, thienyl, furyl, furyl containing OH, or pyridyl;

Subgroup II Ab) consisting of:

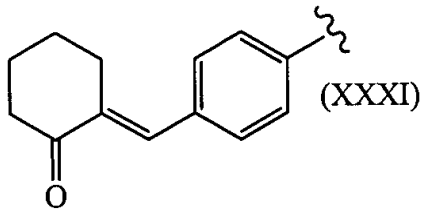
~~II Ab):~~



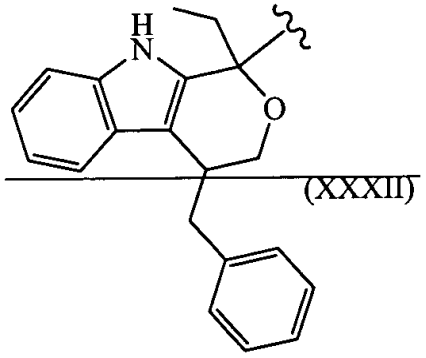
(IIIa)



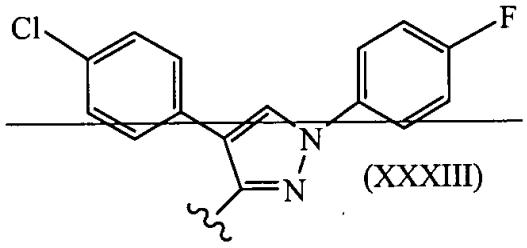
(XXX)



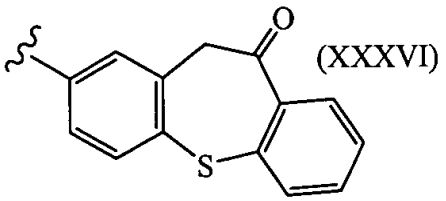
(XXXI)



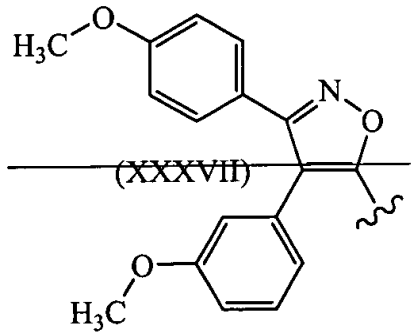
(XXXII)



(XXXIII)



(XXXVI)



(XXXVII)

wherein:

when IIIa) contains $-CH(CH_3)-COOH$ it is known as pranoprofen: α-methyl-5H-(1) benzopyran (2,3-b) pyridine-7-acetic acid;

when residue (XXX) contains $-CH(CH_3)-COOH$ it is known as bermoprofen: dibenz[b,f]oxepin-2-acetic acid;

residue (XXXI) is known as CS-670: 2-(4-2(2-oxo-1-cyclohexylidenemethyl) phenyl) propionic acid, when the radical is $-CH(CH_3)-COOH$;

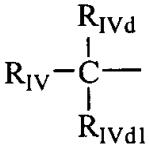
when residue (XXXII) contains group $-CH_2COOH$ it is known as pemedolac;

when residue (XXXIII) is saturated with $-CH_2COOH$ it is known as pyrazolac: 4-(4-chlorophenyl)-1-(4-fluorophenyl) 3-pyrazolyl acid derivatives;

when residue (XXXVI) is saturated with $-CH(CH_3)-COO-$ it is known as zaltoprofen;

when residue (XXXVII) is $-CH_2-COOH$ it derives from the known mofezolac: 3,4-di p-methoxyphenyl) isoxazol-5-acetic acid;

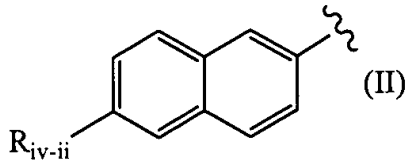
Group IIIA), where t = 1,



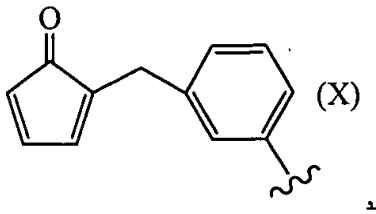
wherein:

at least one of R_{IVd} and R_{IVd1} is H and the other a linear or branched C_1-C_6 alkyl, or difluoroalkyl with the alkyl having from 1-6 C atoms, or R_{IVd} and R_{IVd} jointly form a methylene group;

R_{IV} has the following structure:



(II)


(X)

, or


(III)

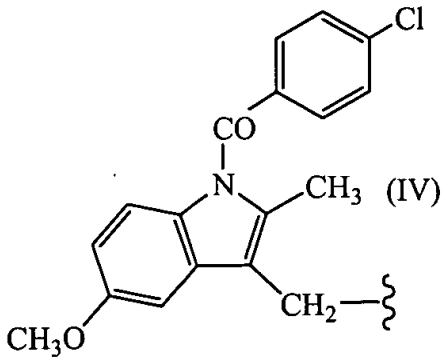
where:

in the residue of formula (II):

$R_{iv\text{-}ii}$ is selected from the group consisting of an alkyl having from 1 to 6 C atoms, a cycloalkyl having from 3 to 7 C atoms, an alkoxymethyl having from 1 to 7 C atoms, a trifluoroalkyl having from 1 to 3 C atoms, vinyl, ethynyl, halogen, an alkoxy having from 1 to 6 C atoms, a difluroalkoxy with the alkyl having from 1 to 7 C atoms, an alkoxymethyloxy having from 1 to 7 C atoms, an alkylthiomethyloxy with the alkyl having from 1 to 7 C atoms, an alkylmethylthio with the alkyl having from 1 to 7 C atoms, cyano, difluoromethylthio, a substituted phenyl-, and phenylalkyl with the alkyl having from 1 to 8 C atoms;

$R_{iv\text{-}iii}$ is a C_2-C_5 alkyl, a C_2 or C_3 alkyloxy, allyloxy, phenoxy, phenylthio, a cycloalkyl having from 5 to 7 C atoms, optionally substituted at position 1 by a C_1-C_2 alkyl;

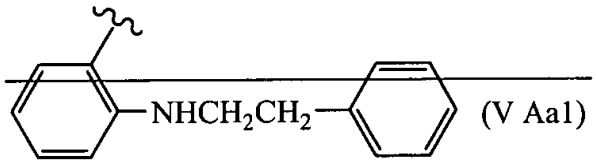
Group IV A)


(IV)

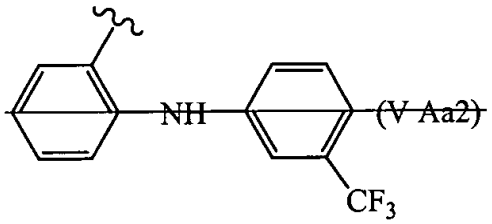
where A = RCOO, t = 1,

~~Group V A) chosen from the following:~~

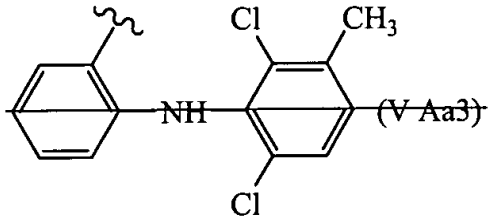
~~Subgroup V Aa) residues chosen from the following, where t = 1~~



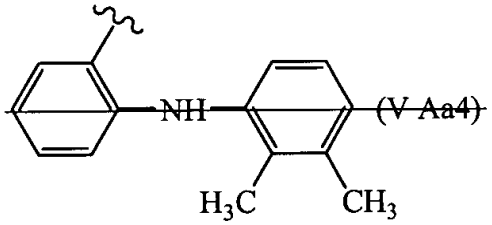
(V Aa1)



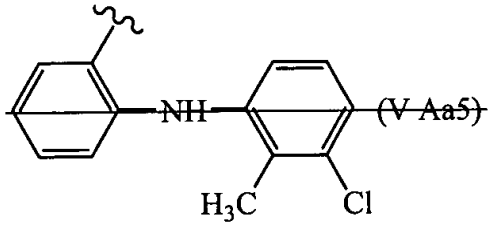
~~(V Aa2)~~



~~(V Aa3)~~

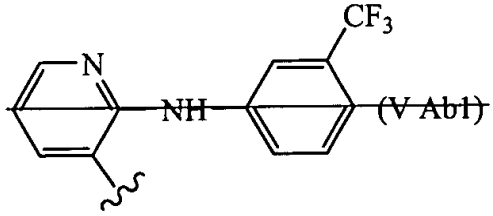


~~(V Aa4)~~



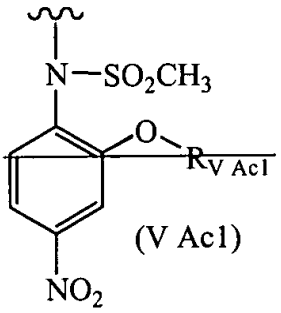
~~(V Aa5)~~

~~Subgroup V Ab), residue, where t = 1:~~

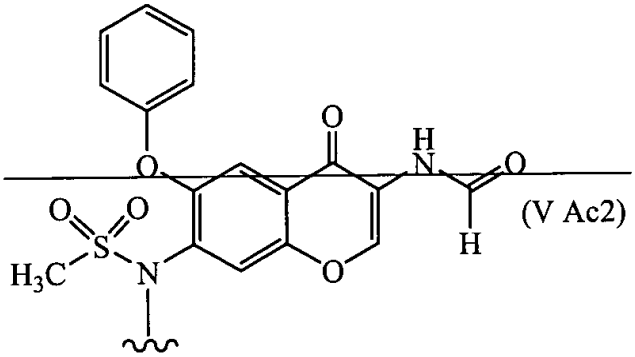


~~(V Ab1)~~

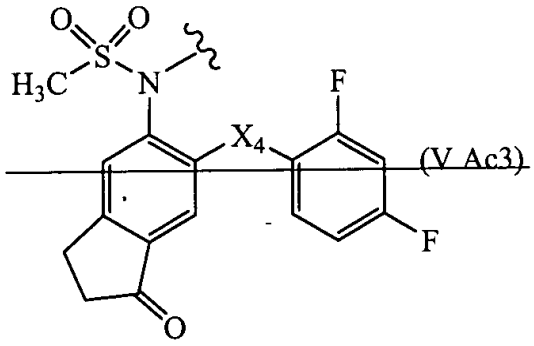
~~Subgroup V Ac), residue, where t = 0 and R is as follows:~~



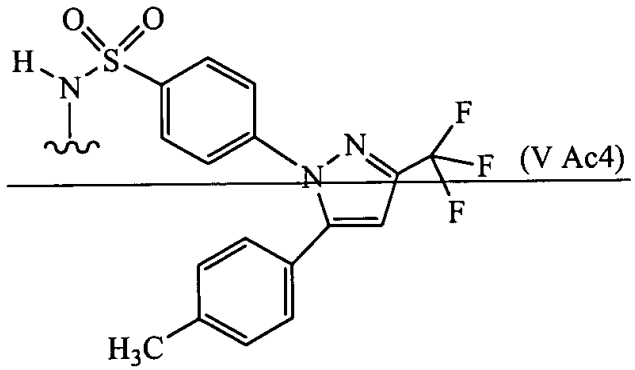
(V Ac1)



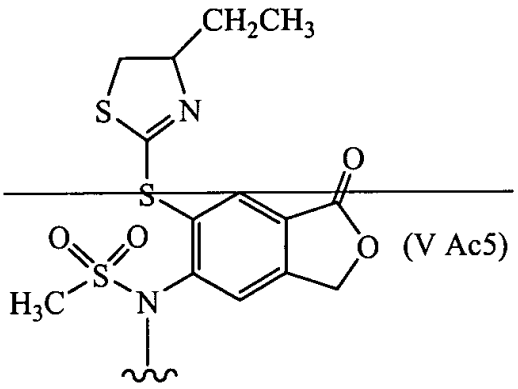
(V Ac2)



~~(V Ac3)~~

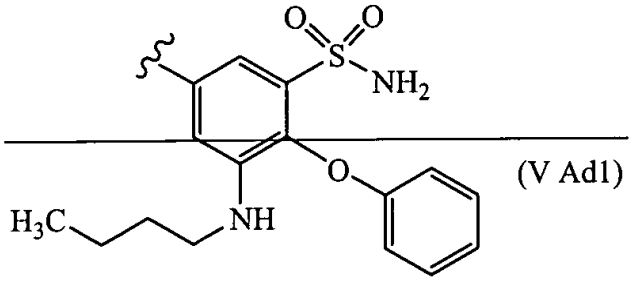


(V Ac4)

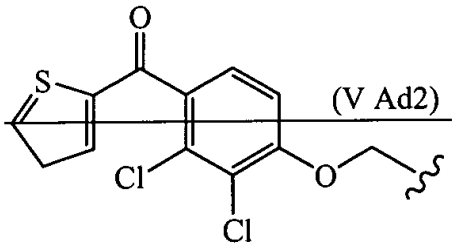


(V Ac5)

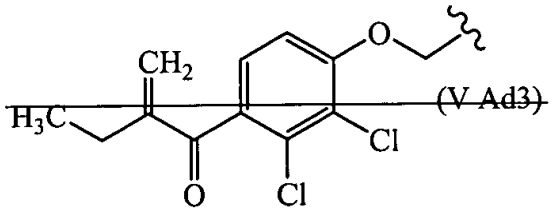
~~Subgroup V Ad) residues, where t = 1 and R is as follows:~~



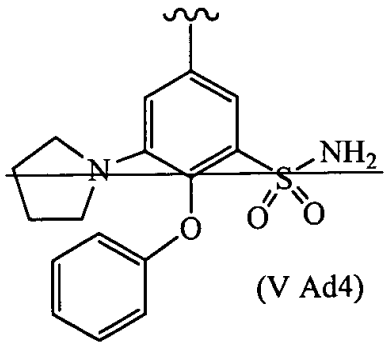
(V Ad1)



(V Ad2)

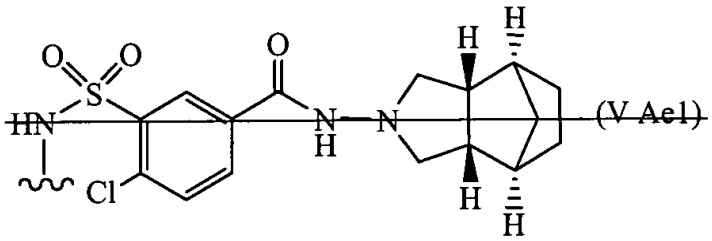


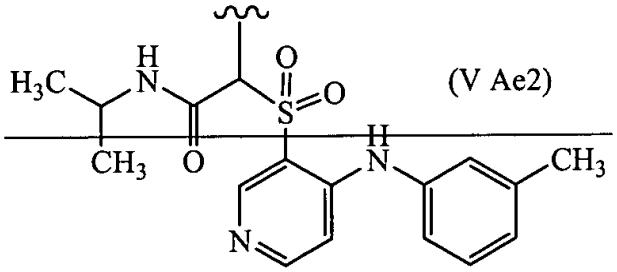
~~(V Ad3)~~

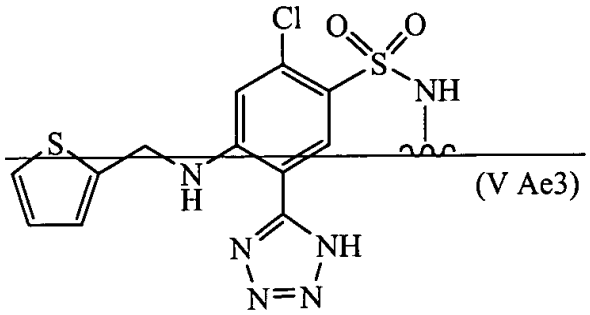


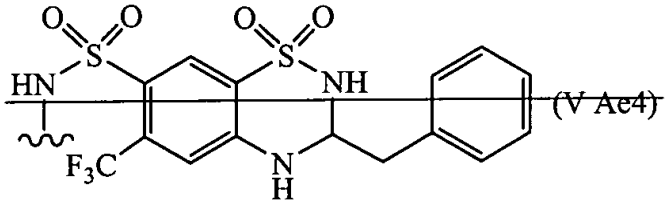
(V Ad4)

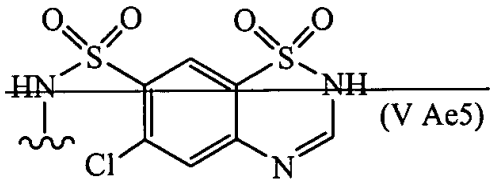
~~Subgroup Ae) residues, where t = 1 and R is as follows:~~

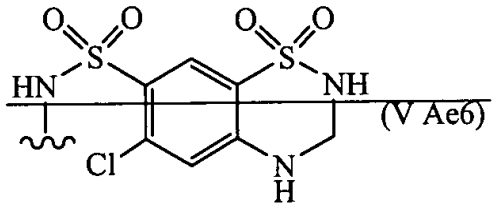


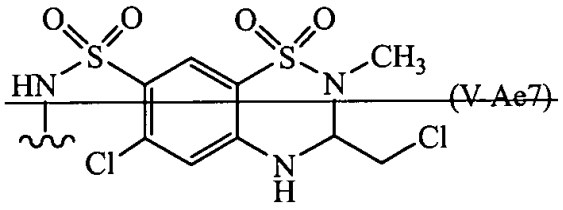




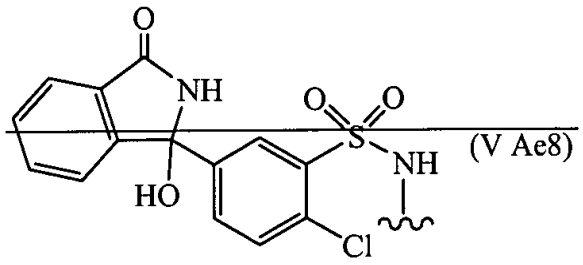




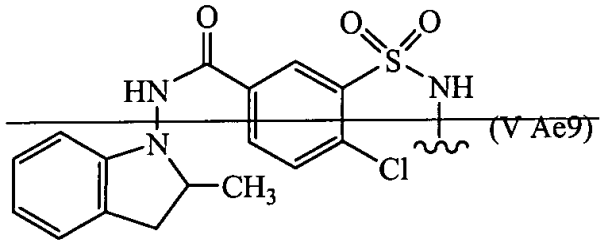




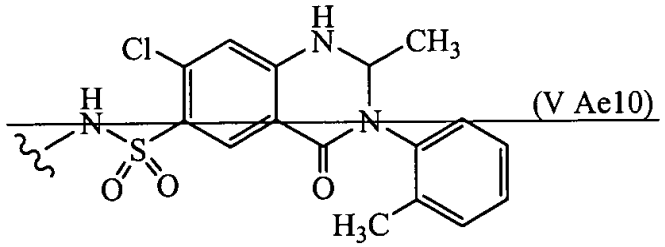
~~(V Ae7)~~



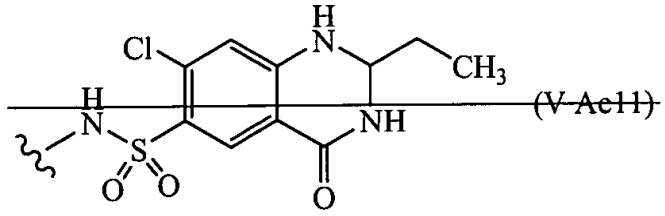
(V Ae8)



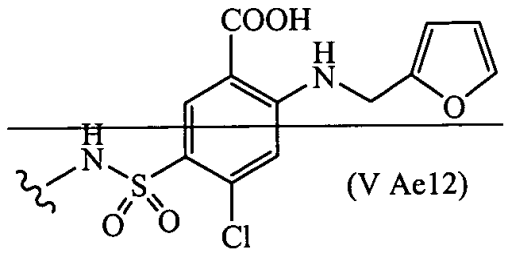
~~(V Ae9)~~



(V Ae10)



~~(V Ae11)~~



(V Ae12)

~~wherein:~~

~~in compounds (V-Ac1) Rvac1 attached to the oxygen atom in position 2 of the benzene ring of the N - (4-nitro-phenyl)methansulphonamide can be phenyl or cyclohexane, when Rvac1 is phenyl the residue is that of nimesulfide;~~

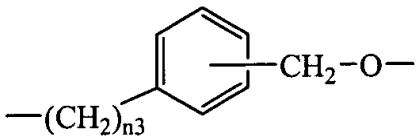
~~in compounds (V-Ac2) the residue of 3-formylamino-7-methylsulfonylamino-6-phenoxy-4H-1-bezopyran-4-one has been shown;~~

~~in compounds (V-Ac3) the atom X_4 that links the radical 2,4-difluorothiophenyl to position 6 of the indanone ring of the residue 5-methanesulfonamido-1-indanone can be sulfur or oxygen;~~

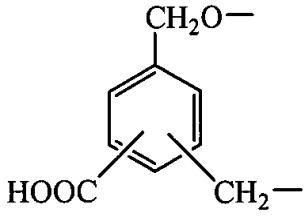
X_1 in formula $A–X_1–NO_2$ is a bivalent connecting bridge chosen from the following:

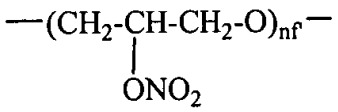
–YO

where Y is a linear or branched C_1-C_{20} alkylene, or an optionally substituted cycloalkylene having from 5 to 7 carbon atoms;

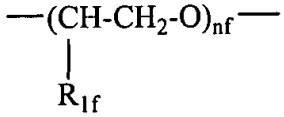


where n3 is an integer from 0 to 3;





where nf' is an integer from 1 to 6; and

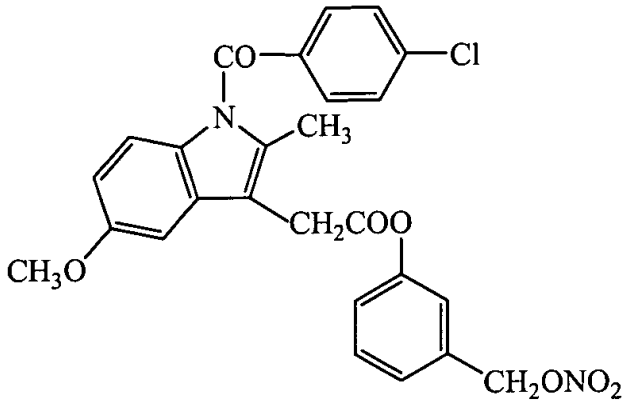


where R_{1f} = H or CH_3 and nf is an integer from 1 to 6.

Claim 2. (Currently Amended) The method according to Claim 1, in which R is chosen from groups ~~IV A), V A) and II A)~~ IIA) and IVA).

Claims 3 to 8. (Canceled)

Claim 9. (Previously Presented) A compound having the following formula:



Claim 10. (Previously Presented) A method for treating urinary incontinence comprising administering to a patient in need thereof a therapeutically effective amount of the compound of claim 9 or a pharmaceutically acceptable salt thereof.

Claims 11 to 25. (Canceled)

Claim 26. (Previously Presented) A method for treating urinary incontinence comprising administering to a patient in need thereof a therapeutically effective amount of the compound flurbiprofen 4-(nitrooxy)butyl ester having the following formula: